very network of babbling brooks and streams—those of Lykipia forming the mysterious Guaso Nyiro; those of Kikuyu the Tana, which flows to the Indian Ocean through the Galla country; while further, south, in Kaptè the streams converge to form the Athi River, which flows through U-kambani to the Sabaki River."

Here is Mr. Thomson's account of his observations on Mount Kenia:—"We were now at an altitude of 5700 feet, which may be taken as the general level of the plain from which Mount Kenia rises. Kenia itself is clearly of volcanic origin, and may be considered to be a counterpart of the Kimawenzi peak of Kilimanjaro. Unlike Kilimanjaro, its volcanic forces have not changed their focus of activity, and hence it now stands as a simple undivided cone. Up to a height of 15,000 feet (9000 feet above the plain) the angle of slope is extremely low, being in fact only between 10° and 12°, a fact which would seem to show that the lavas ejected must have been in a much more liquid condition than those of Kilimanjaro. The angle in the latter is much higher, indicating that the ejections were more viscid, and consequently did not flow so far from the orifice. At an elevation of over 15,000 feet the mountain suddenly springs at a high angle into a a sugar-loaf peak, which adds a further height of about 3400 feet. At the base of the peak two small excrescences are noticeable, and some distance to the north there rises a humpy mass. This peak, as in the case of Kimawenzi, without a doubt represents the column of lava which closed the volcanic life of the mountain, plugging or sealing up the troubled spirits of the earth. The crater has been gradually washed away—having been composed, doubtless, of loose ashes and beds of lava, and now the plug stands forth, a fitting pinnacle to the majestic mass below. As at Kilimanjaro, nature has appropriately woven for its grim head a soft crown of eternal snow, the cool, calm shining of which is at once a wonderful contrast and a strange close to the mountain's fiery history. The sides of this upper peak are so steep and precipitous that on many places the snow is quite unable to lie, and in consequence the rocks appear here and there as black spots in the white mantle. Hence its Masai name of Donyo Egèrè (the speckled or gray mountain). The snow covers the whole of the upper peak, and extends some distance on either side, reaching, and indeed including, the humpy mass on the north. The peak is strikingly suggestive of an enormous white crystal or stalagmite, set upon a sooty basement, which falls away gradually into the dark emerald green of the forest region round the base."

On the north side of Mount Kenia very few streams have their origin, though on the south side they are said to be abundant. It is still more unaccountable that, except on the south side of Mount Kilimanjaro, not a stream trickles down the snow-capped mountain, a phenomenon which only actual exploration can account for. One of our illustrations (Fig. 2) shows a great lava-cap in the Elgeyo Mountains to the west of Lake Baringo. In a running survey such as Mr. Thomson made, minute observation is of course impossible; but with his experience as a field geologist and his general caution, we may accept his geological map of the region lying between Victoria Nyanza and the coast as in a general way representative of the facts. Along the coast at Mombassa we find a strip of Tertiary rocks, succeeded westwards by a broad band of Carboniferous. West and north west of this is a great area of metamorphic rocks, having their counterpart further westwards on the east side of Victoria Nyanza. Between them, in three irregular strips, lie the earlier and later volcanic series, the mass of Kilimanjaro winding its way into the metamorphic, and Kenia lying on the northern edge of the latter. That volcanic activity is not quite extinct is shown by the fact that in the Kenia region hot springs and pools are met with, and the natives have a tradition that on the site of Lake Chala, on the east side of Kilimanjaro, once stood a large and populous town.

Thus Mr. Thomson has been able to fill up in a very satisfactory manner a considerable blank on the map of Africa. He has moreover established the fact that Baringo is a distinct lake, and that the east shore of Victoria Nyanza trends much more to the north-west than we find it on Mr. Stanley's map. The combined observations of Mr. Thomson and Mr. Johnston are a valuable addition to a scientific knowledge of one of the most interesting regions of Africa.

NOTES

MANY of our readers will be pleased to learn that M. Charles Feil has, after some years' absence, returned to the active management of his celebrated manufactory of optical glass in Paris, the new firm being "Feil père et Mautois." M. Charles Feil, who is well known both for his scientific and business abilities, is grandson to M. Guinaud, who, some sixty years since, in a mode of working almost identical with that adopted by the celebrated potter Palissy, overcame the serious obstacles which occur in securing the perfect homogeneity of both crown and flint glass, and whose secrets have descended to his grandson.

IT is with great regret we announce the death, on the 7th inst., of Mr. Edward Caldwell Rye, Librarian to the Royal Geographical Society, after a very short illness, from small-pox, aged about fifty-two years. In natural history he specially made his mark as an entomologist, and for a long time was the chief authority on British beetles, on which subject he was the author of a volume in Lovell Reeve and Co.'s series of popular works on British Natural History. For several years he contributed the article "Coleoptera" to the *Entomologists' Annual*, and he was one of the editors of the *Entomologists' Monthly Magazine* from its commencement in 1864. Furthermore he was for some years on the staff of the *Zoological Record* as a contributor, and since the 10th volume of that useful publication he had been sole editor. Nowhere will his nearly sudden death be more felt than at the Royal Geographical Society, for, in addition to his ordinary duties as Librarian, that of editing the bibliographical portion of the *Proceedings* devolved upon him. Mr. Rye married a daughter of Mr. G. R. Waterhouse, of the British Museum, who, with four children, all young, survives him; and, if report be true, they are left almost unprovided for. He was a Fellow of the Zoological Society, a member of the Entomological Society of London, and the Recording Secretary of Section E at the meetings of the British Association.

WE regret to announce the death, at Paris, on February 1, at the early age of thirty-four, of Mr. Sidney Gilchrist Thomas, to whom is mainly due the basic Bessemer process. Born in 1850, he entered the Civil Service, but from his youth showed a taste for science, and especially metallurgy. The project of eliminating phosphorus by the Bessemer converter soon occupied all his attention, and, after numerous experiments at Blænavon, in 1877 he took out his first patent, and communicated his invention to the Iron and Steel Institute in a paper read at the Paris meeting in 1878.

THE Minister of Agriculture in Canada has just declared the Bell telephone patent void in the Dominion, the occasion being a double infraction of the Canadian law by the Canadian Telephone Company. It appears that the Company imported telephones after the expiry of two years from the date of the patent, and that it also refused to sell instruments to the public, demanding annual rentals for the lease, as in this country and in the States. Both these acts contravene the Dominion law.

UNDER the title of "The Cost of a Fog," Mr. W. T. Makins, Governor of the Gas Light and Coke Company, writes to the *Times* under date of January 24:—"Perhaps your readers may be interested to read the experience of the Gas Light and Coke Company on the occasion of last Tuesday's fog. Ninety-six million cubic feet of gas were sent out during the twenty-four hours ending at midnight on Tuesday. This quantity was an increase on that of the corresponding day in 1884, which may be taken to have been an ordinary January day, of 37 per cent., or over 35,000,000 feet. The price being 3*s.* per 1000 feet, the public had to pay this one company 5250*l.* extra on account of the fog. Nine thousand five hundred tons of coal were carbonised during the twenty-four hours to produce the 96,000,000 feet, the largest quantity we have ever sent out in one day."

THE *Times* Alexandria correspondent, in reference to the Egyptian Sanitary Board, takes occasion to mention the immense services which might be rendered to that country and to science by the appointment of a scientific microscopist and analyst to the uncontrolled charge of the Health Department. An eminent physician assures him that half the population are mentally and physically incapacitated for work, owing to the existence of certain diseases, which sanitary study might remedy.

FOLLOWING the example of the United States Geological Survey, that of Canada has lately enlarged the sphere of its operations, so as to include ethnological work in its publications. The first result of this wise measure is a volume containing copious comparative vocabularies of the chief Indian languages still current in British Columbia, for which the authors, W. Fraser Tolmie and George M. Dawson, have been collecting materials since the year 1875. In this collection, which was issued in 1884 by Dawson Brothers of Montreal, the list of words proposed by Mr. Gibbs in his "Instructions for Research Relative to the Ethnology and Philology of America," has been adopted as a basis, and his orthographic system has also been largely adhered to. The vocabularies thus comprise over 200 words of one or more dialects of every stock language spoken on the Pacific slope of the Rocky Mountains from Alaska southwards to the Columbia River. Appendices are added containing comparative tables of other native languages from vocabularies already printed, and from these tables it appears evident that, contrary to the hitherto prevalent impression, the widespread Tinné (Athabascan) family is represented on the Pacific slope in the Tshimsian group about the Nasse and Skeena rivers over against the Queen Charlotte Islands. Nevertheless on the accompanying linguistic map, which is on a large scale, this group is still coloured separately as if it were a stock language, and not a branch of the Athabascan, as is now for the first time made evident. The other stock languages of this region—Haida (Queen Charlotte Islands), Thlinkit (from Alaska to the Nasse River), Kwakiool, Aht, and Kawitshin (Vancouver Island), Niskwalli (Puget Sound), Cheheili (Washington Territory), Tshinook (Lower Columbia River), Bilhoola (Bentinck and Dean Inlets), Selish (Fraser River), Sahaptin (Right Bank Columbia River), and Kootenuha (Kootenay and Upper Columbia Rivers)—all are represented in one or more of their branches. Altogether valuable materials are here collected and conveniently arranged for the comparative study of nearly thirty languages or distinct dialects current in one of the most intricate linguistic domains on the American Continent.

THE African Association will shortly send to the Congo the apparatus required for establishing telephonic communications between certain stations on the lower river.

ACCORDING to the report of Capt. E. Backhaus, of the German ship *Carl* (published in *Hansa*), that vessel, while on her voyage from New York to Trieste, experienced an earthquake at sea on the night of December 21–22 last. For about five minutes the ship was violently shaken. The lamp shades were thrown to the ground, and the upper layers of the tins of petroleum between decks were pitched up against the deck. She was then at 36° 34′ N. lat. and 22° 26′ E. of Greenwich, that is, near Cape Matapan in the south of Greece. Those on board thought the ship had struck on a rock, and the pumps were rigged and set working. The sea was still, but had a whitish colour; the wind was east and light, and the rate was about three nautical miles per hour. When examination was made subsequently, no trace of injury was found on the wood or copper outside. The captain was led to make a report of the occurrence at Trieste by hearing of the Spanish earthquake, as well as from another shipmaster, who had experienced the same phenomenon also to the south of Greece.

THE last four years have been a period of unusual activity in railway construction in Japan. How much has been done in that period, and is now being done, is not generally understood in Europe. The following statement on the subject is summarised from a paper communicated to the Geographical Society of Toulouse by Capt. Fouqué, Professor of Mathematics in Tokio. The line between Tokio and Yokohama, eighteen miles in length, was opened in June, 1872; that between Hiogo and Osaka in March, 1874, its extension to Kioto in 1876, and a further extension to Otsu, making the total length from Hiogo about sixty miles, in 1879. At Otsu it reached the shores of Lake Biwa. What may be regarded, therefore, as a prolongation of this line is that from Nagahama, at the head of the lake, to Tsuruga, an important harbour on the sea of Japan, a distance of over twenty-five miles. There is thus a direct steam connection (as there is a fleet of steamers on the lake) between Hiogo on the Inland Sea, and the Sea of Japan on the west. On May 25 last a line was finished between the same—Nagahama and Sekigahara—with a continuation to Ôgaki, a total distance of about fifty-five miles, through the centre of the province of Mino, one of the most productive in Japan. The last line finished is that between Tokio and Tagasaki, which was opened by the Emperor on June 25, 1884. The length is about sixty-two miles, and it taps the rich provinces of Joshin, Shinshin, and Boshin, the great centres of silk, tea, and tobacco cultivation. There were no serious engineering difficulties on this line, perhaps the most important of any yet constructed in Japan, for it traversed large and fertile plains. Thus the total length of the railways actually constructed in Japan is about twenty-three miles. Two short lines in course of construction are those between Shinagawa, near Tokio, and Kawaguchi, and one from Tagasaki to Mayebashi, the capital of the silk trade. The latter is only about eight miles long, and may be regarded as complete. Of projected lines the construction of the following have been decided on, and the work should be commenced by this time: (1) one from Tokio due north through the centre of the main island to Awomori, opposite Hakodate, in the Island of Jezo. This would be one of the main trunk lines of Japan, and its length will be about 450 English miles. (2) From Takasaki to Ôgatchi, the first part of a line which will ultimately reach Yokkaichi, an important seaport on Owari Gulf, on the east coast. The length of this will be about 200 miles. (3) From Nyeda, in Shinano province (in the centre of the main island) to Niigata, the principal part of the west coast, 150 miles, and two shorter lines intended to connect important towns with neighbouring ports. It has been decided recently to construct tramways between some of the principal towns omitted in the railway scheme, the first being between Tokio and Kofu, a distance of about 700 miles. The amount of money available for public works of this description is necessarily limited, and the progress is therefore, everything considered, exceedingly rapid.

According to a Russian journal, quoted in *Globus*, the Russian law, especially as regards murders, is now to be enforced amongst all natives under Russian rule. Hitherto the murder of a Kirghiz was punished by their own customs in the following manner:—When in an aul or in the steppe a murder has been committed, the relatives and friends of the dead man commence the search for the murderer. Sometimes he is not found until after a long interval, especially if the body is not soon found. Frequently the latter is hidden, then the flight of birds of prey is watched, and other indications are utilised by the extraordinary acuteness of the nomads. When the murderer is discovered the relations have the right to levy from him a so-called *kun*. This fine, which washes away bloodguiltiness, consists of a number of camels, horses, sheep, and clothes, a special *kun* being due to those who took part in the search for the murderer, to the person who actually discovered him, and to the judge. The fine, or *wergild*, for a woman is less than that for a man, and in the latter case it varies with the descent. Thus there would be a greater fine for killing a pure Kirghiz than for killing one whose descent was unknown. If the murderer cannot pay the *kun*, his kinsfolk must do it for him, and the payment and receipt of this fine is accompanied by a number of different customs. The occasion is a kind of festival in the aul in which the relatives of the murdered man live. Among the animals paid as *kun*, the murderer's horse must always be one. The family of the person killed have, however, the right to refuse all payment, and to demand a duel with the slayer. The latter appears in the aul of the others armed from head to foot, and mounted on his best steed; a certain distance off the avengers are stationed, and a wild race ensues. If the accused can get away from his pursuers, he is safe from all punishment; he can, however, only be pursued to the going down of the sun, and directly the latter sinks behind the horizon he is free. If he is caught he is generally put to death at once. It is remarkable that a murder rarely remains undiscovered. The Kirghiz hardly ever commit that crime for the sake of robbery; the murder generally takes place after a quarrel, or for revenge.

Among the various contrivances for indicating 24 hours on watch dials, one by Sturrock and Meek, mentioned in the February number of the *Horological Journal*, seems to be neat and ingenious. The dial is made with twelve holes in place of the usual figures. During the first half of the day, midnight to noon, the figures 1 to 12, placed on a disk at the back, show through; at noon the disk becomes automatically shifted so that the figures 1 to 12 are replaced by figures 13 to 24 (0); at midnight the figures 1 to 12 are again brought into view. Thus, whilst retaining the ordinary and familiar and convenient 12 hour spaces, the advantage of the 24-hour system is obtained without the necessity of keeping a double set of hourly figures constantly in view.

To the *Boletin de la Institucion libre de Enseñanza* for January 15, D. Augusto Arcimis sends an account of the meteorological branch of the observatory recently attached to that institution. The building is situated in the Paseo del Obelisco in the north of the city, where it is surrounded only by low buildings and removed as far as possible from disturbing influences. Pending the acquisition of improved instruments a mercurial barometer connected with two thermometers, and with a diameter of 4 mm., has been set up, and since last December its readings have been systematically compared with those of the barometer in the Medical Observatory. With another instrument, specially constructed by Salleron of Paris, records are taken of the atmospheric temperature in the shade, as well as of the moisture, certain modifications having converted it for practical purposes into a hygrometer similar in principle to that of Mason. The thermometer of maxima is modelled on the system introduced by Negretti and Zambra of London, while that of minima adopts the Rutherford system, both being manufactured by Secretan of Paris. To avoid as far as possible the disturbing influences to which all meteorological stations are exposed in large cities, the instruments are placed in wooden boxes, which, while exposed to the free circulation of the air, are still thoroughly protected from bad weather and from the direct rays of the sun. The Institution has also been supplied with other instruments for determining the amount of evaporation, the loss of heat by radiation, the force, pressure, and direction of the winds prevalent throughout the year. This meteorological station is thus one of the best equipped in Europe, and in fitting it up advantage has been taken of the experience already acquired from the working of similar establishments elsewhere.

The first railway in Cochin-China was opened on December 21 last. It runs from Saigon to Mytho, the journey taking about four hours.

In connection with the Parkes Museum a meeting will be held at the Mansion House on Friday at 3 p.m. to obtain more extended support for the Parkes Museum, so that it may be firmly established on a permanent basis. The Right Hon. the Lord Mayor will preside, and the Council hope to have the support of all those interested in promoting public health and a knowledge of the laws of hygiene.

At the Meeting of the Council of the National Smoke Abatement Institution, preliminary to the recent annual meeting, a letter was read from the secretary of the Duke of Westminster stating that in his Grace's town house nothing had been burnt but coke, with the most satisfactory results. The Draft Report to the Annual Meeting was presented by the Secretary, to which, at the chairman's suggestion, it was decided to add a paragraph calling attention to the obsolete character of the boundaries within which the present Metropolitan Smoke Act is operative, and pointing out the necessity for a short amendment Act aiming at a rectification of the boundaries, and the necessity for a firmer and fuller application of the provisions of the Act to certain industries in which smoke abatement is now much easier than it was at the time when the present Act was passed. It was resolved to communicate with the Home Secretary, calling his attention to the documents which had been already forwarded to him, and to the paragraphs in the Report relating to the nominal nature of the fines imposed by the magistrates in cases of infringement of the Act, and ask him whether, under the circumstances, he would be willing to issue a circular calling the attention of the police magistrates to the evils which result from the difficulty of obtaining a due enforcement of the law. It was further resolved to issue a separate memorandum, in the form of a leaflet, putting forward some information as to the conditions to be considered in the choice of grates, in the burning of fuel, and in the general treatment of a coal fire.

Prof. Sidney Colvin, Slade Professor of Fine Art in the University of Cambridge, will give two lectures at the Royal Institution, on Tuesdays, February 17 and 24, on "Museums and National Education."

Some of the fish in the Salmonidæ tank at the South Kensington Aquarium have recently been spawned, the species operated upon being the *S. levenensis*, *S. fontinalis*, and the *Gilleroo* trout of Ireland. The eggs have been deposited in suitable hatching boxes, where they afford satisfactory evidence of ultimate success. It will be particularly interesting and edifying to note the result on account of the prolonged captivity of the fishes from which the eggs were spawned.

The fine aquarium on view during the Health Exhibition will naturally be in existence during the forthcoming Inventions Exhibition. In addition thereto will be shown a very large collec tion of fish culture appliances showing the process of hatching, the mode of dealing with the fry after losing their umbilical sac, and the best means of artificially feeding them until they have reached that stage in their existence when they are able to provide for themselves. A special building is to be erected for this purpose in proximity to the aquarium, which is now in course of construction. This section of the Exhibition, which will be under the entire direction of the National Fish Culture Association, promises to be a source of much attraction and interest to the ichthyological world.

An experiment has lately been tried by the Secretary of the National Fish Culture Association at South Kensington to test the highest temperature endurable by various species of fish. To this end several specimens of the following fish were selected for the trial, viz. the carp, gudgeon, dace, roach, perch, minnow, golden tench, common tench, trout, and salmon, all of which were deposited in cold water registering 53°. The temperature was then gradually increased by the infusion of hot water through a tube which caused the temperature to rise steadily. None of the fish, however, exhibited signs of fading vitality until the thermometer recorded 82°, when a perch became prostrated; and shortly afterwards its congeners followed its example in rapid succession in the following order:—Roach, 82½°; salmon, 83°; minnow, 85°; gudgeon, 85½°; dace, 86°; common tench, 88°; golden tench, 88°; carp, 91°.

So as to further test the efficacy of brandy as a fish restorer, about which much has lately been said, each fish on showing signs of exhaustion was removed from the water, dosed with a small quantity of brandy, and replaced in the tanks from whence it was taken. The operation proved highly successful, for on inspection the following day all the objects of the experiment were found swimming about as usual, and thoroughly restored to their normal exuberance, with the exception of the dace, which succumbed to the severe ordeal through which it had passed.

The additions to the Zoological Society's Gardens during the past week include a Green Monkey (*Cercopithecus callitrichus*) from West Africa, presented by Mr. F. W. Robinson; a Royal Python (*Python regius*) from West Africa, presented by Mr. A. H. Berthoud; a Long-eared Owl (*Asio otus*), British, presented by Mr. R. Farren; two Kagus (*Rhinochetus jubatus*) from New Caledonia, purchased.

GEOGRAPHICAL NOTES

In a special article communicated to the *New York Tribune*, Lieut. Greely unfolds his views upon future Arctic exploration. Of the five well-known routes to the Pole, he advocates the Franz Josef route as the only probable one. Lieut. Greely shows by all the experiences of Arctic travellers, from Sir Edward Parry downwards, that continuity of land, with northern trend and western aspect, and a secure harbour easy of access, together with good ice for sledging operations, are necessary desiderata for Arctic exploration. He maintains that all these conditions are fulfilled in the fifth route—viz. that by Franz Josef Land. "This route," continues Lieut. Greely, "presents unusual chances of success with the minimum of danger. It is more than possible that an English expedition will enter these waters. Chief Engineer Melville, U.S.N., has in view an expedition by this route, and his varied Arctic experiences and indefatigable energy mark him as a man peculiarly fitted for this work. It is therefore to be hoped that he will be given the desired opportunity. Two ships with about sixty men and officers would be needed. One vessel should winter in Eira Harbour or some secure point near by, while the second should be pushed as far northward as possible, preferably by Austria and Rawlinson's Sounds, but, if that is not possible, along the west coast of Franz Josef Land beyond Cape Ludlow. The vessels should be provisioned for three years, and the crews should be quartered in temporary houses to be erected on shore. August and September there, as in Smith Sound, are undoubtedly the most favourable months for ice navigation. In case of a bad year for ice the vessels should rather return, to renew the expedition the year following, than adventure the experiences of the *Tegethoff*. After full suggestions and recommendations as to the command and outfit of the expedition, covering every branch of the subject, the writer expresses a doubt whether the United States Government will extend any aid to Arctic exploration for years to come, but none the less does he believe in the propriety and certainty of future Arctic work. In concluding his article Lieut. Greely says:—"The expedition suggested by Lieut. Ray, United States Army, at the meeting of the British Association at Montreal, should receive the attention and support of scientific men. The magnetic pole of Boothia Felix Land, located by Ross in 1831, has probably changed its position in the past fifty years. Its re-location would be an important contribution to science. With a home station at Repulse Bay or in Wager River, I believe this work could be done without great expense or serious danger. The benefits to be derived from such an expedition would not be confined to terrestrial magnetism. As regards ethnology, botany, and natural history, the country around King William Land is substantially a blank."

An interesting account of recent Norwegian explorations in the Spitzbergen Seas will be found in yesterday's *Times*. Several new islands have been discovered to the east of King Karl or Wiche Land. These explorations show that the year 1884 was a very remarkable ice-year. The west side of Spitzbergen was blocked by a belt of land-ice the whole summer through, while the east side, which is nearly always blocked with ice, was more open than it has been for many years. These conditions, there seems little doubt, depend on the prevailing direction of the winds.

According to the *American Naturalist* three expeditions have been despatched during the last summer to explore the lake region reported to exist in the north-eastern part of the provinces of Quebec and in Labrador. One went by way of Lake St. John, another by the River Betsiamits, and a third from Newfoundland. The last has orders to land scientific observers at various points upon the coast of Labrador, where they will spend the winter. Little that is definite appears to be as yet known respecting the actual dimensions of Lake Mistassini and other bodies of water in this region. A French missionary, writing in 1672, says that this lake is "believed to be so large that it took twenty days to walk around it." Mr. Burgess affirms that it is 150 miles in length, and abounds in deep bogs. An old trader of the "Compagnie des Postes du Roi," who was stationed on it for several years, estimated its least width at ninety miles. The account of 1672 mentions another lake, "ten days' round, and surrounded by lofty mountains." These lakes appear to occupy a depression similar to that occupied by Lakes St. John, Temiscaming, and many smaller lakes to the southward, and Silurian limestone has been observed in Lake Mistassini as well as at Lake St. John. The former lake is supposed to be about 1300 feet above the sea, and the land between it and Lake St. John to the south is only 300 feet above the sea. The plain around it is said to be very fertile, and attention has recently been called to the magnificent forests and fertile soil of the country around Hudson's Bay to the north of it. The explorations now in progress will doubtless open up extensive areas for colonisation, besides adding largely to our geographical knowledge.

La Gazette Géographique announces the death, in Tonquin, of M. Stocker, who perished recently in an expedition against the Muongs on the Red River. M. Stocker, who was a native of Alsace, travelled for thirty years in the United States, having explored specially the Rocky Mountains and the territory of Alaska. He returned recently from California to France, and was despatched by the Government to investigate the mineral wealth of Tonquin, where he discovered the auriferous deposits of Myduc. His reports on the subject were not encouraging for the development of mining enterprise there, as he declared that the value of the mines had been greatly exaggerated. He was shot dead during one of the skirmishes in the Muong expedition.

Sixteen "*brigades topographiques*" embarked at Marseilles on January 31, fourteen for service in Algeria and two in Tunis. These brigades are under the command of an officer, of an engineer, and of an official of the geographical department of the War Office in Paris. The whole include seventy-two officers, each accompanied by two soldiers and a native sharpshooter.